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In re Application of: Neufeld et al
Serial No.: 10/531,301
Filed: April 14, 2005
Office Action Mailing Date: January 16, 2007

Examiner: Louis M. Arana
Group Art Unit: 2859
Attorney Docket: 29490

Amendments to the Drawings:

Attached hereto are two sheets of drawings, designated as Sheets 5/23 and 6/23, respectively including amendments to Figures 8a and 8b. In Figures 8a and 8b, reference sign 24 has been labeled as "RF transmitter", and in Figure 8b, reference sign 23 has been labeled "balancing adjuster".

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REMARKS

Reconsideration of the above-identified application in view of the amendments above and the remarks following is respectfully requested.

Claims 286-347 are in this Application. Claims 289-295 and 313-347 have been withdrawn from consideration. Claims 286-288 and 296-312 have been rejected under 35 U.S.C. § 102.

Amendments To The Specification

The abstract of the disclosure has been copied to a new page, in accordance with MPEP § 608.01(b).

Amendments To The Drawings

Figures 8a and 8b have been amended, as required by the Examiner. Reference sign 24 of Figures 8a-b has been labeled as "RF transmitter", in accordance with page 21 line 22 of the specification, and reference sign 23 of Figure 8b has been labeled "balancing adjuster", in accordance with page 26 line 3 of the specification.

Claim Rejections

The Examiner rejects claims 286-288 and 296-312 under 35 U.S.C. § 102(b) as being anticipated by Misisic *et al.* The Examiner states that Misisic *et al.* discloses a device for providing a static magnetic field, a processing unit, and a radiofrequency resonator coupled to an RF transmitter. The examiner identifies references signs 42 and 44 of Misisic *et al.* as the conductive elements, and references signs 60, 62 and 72 of Misisic *et al.* as the electronic circuitry of the claimed invention.

Applicant respectfully traverses the rejection and states that the Examiner has not established a prima facie case of anticipation regarding the claims, because Misisic *et al.* lacks at least one limitation of the claims.

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The following arguments relate primarily to the independent claims. The dependent claims are allowable at least by virtue of their parent claims

The claims before the Examiner are directed to a RF resonator for magnetic resonance analysis, an apparatus which comprises the RF resonator and a method which utilizes the RF resonator. The RF resonator comprises two or more conductive elements and electronic circuitry. The electronic circuitry is designed and configured for matching an impedance of the RF resonator to an impedance of an RF transmitter electrically communicating with the electronic circuitry, and for balancing an RF magnetic field produced by the conductive elements, such that the RF magnetic field has a substantially symmetrical profile with respect to a transverse axis.

Misic *et al.* teach a resonator assembly which includes two saddle shaped conductive resonator coil portions. The conductive resonator coil portions are mirror images of each other about a horizontal plane extending midway therebetween. The resonator assembly also includes two impedance matching networks with tuning capacitances which are respectively connected to the conductive coil portions. The matching and tuning capacitances are variable capacitances which are interconnected to be adjusted concurrently. The capacitive loading at each end of the resonator coil is adjusted such that the zero voltage points of the first and second coil portions are at their physical centers.

In sharp distinction from Misic *et al.*, the electronic circuitry of the claimed RF resonator is designed and configured inter alia for balancing the RF magnetic field produced such that the RF magnetic field has a substantially symmetrical profile with respect to a transverse axis.

Applicant wishes to point out that Misic *et al.* do not teach or imply a substantially symmetrical profile, all the more so electronic circuitry which balances the RF magnetic field to have a substantially symmetrical profile. It is therefore the applicant's strong opinion that claims 286, 296 and 303 are not anticipated nor rendered obvious by Misic *et al.*

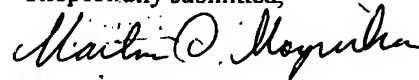
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In view of the above remarks it is respectfully submitted that the claims are patentable over Mistic *et al.* A prompt notice of allowance is respectfully and earnestly solicited.

Respectfully submitted,



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Registration No. 40,338

Date: April 16, 2007

Enclosed:

Letter to Chief Draftsman;
Annotated Marked-Up Figures;
Formal drawing Transmittal; and
Replacement Drawings

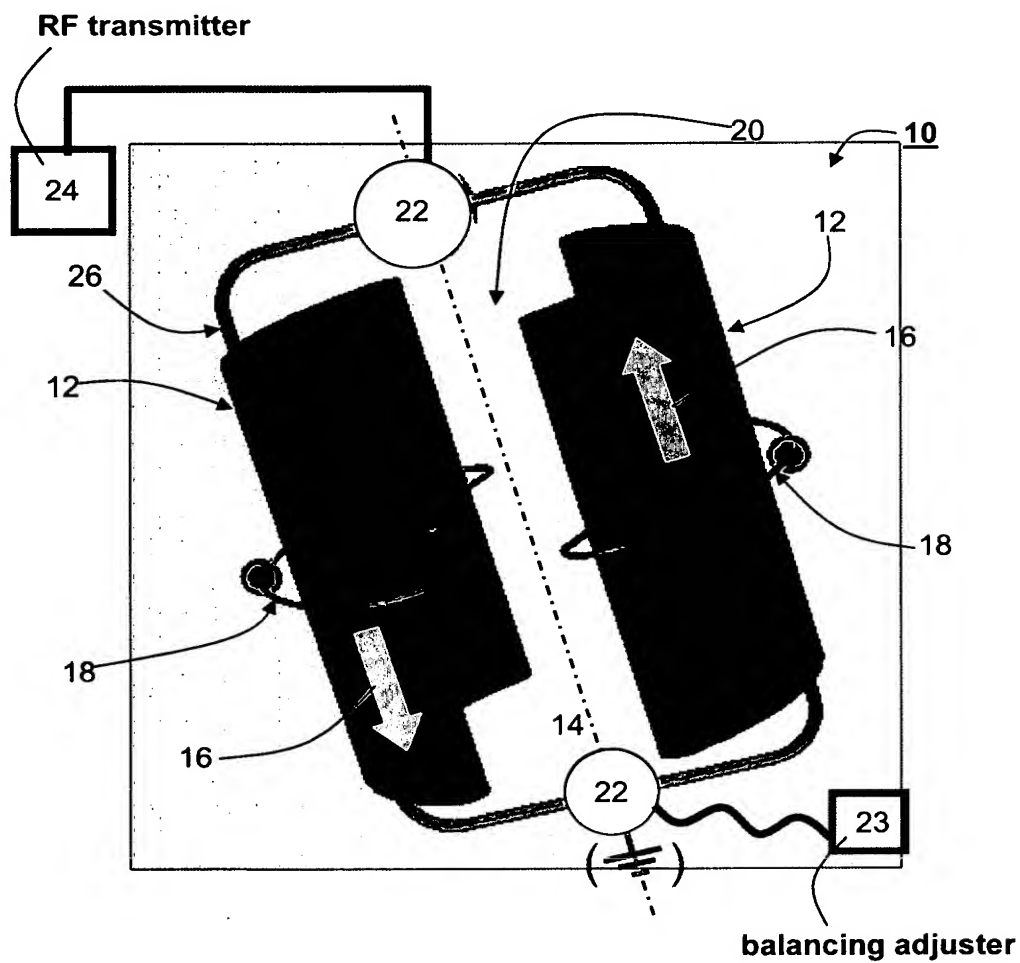


Fig. 8a

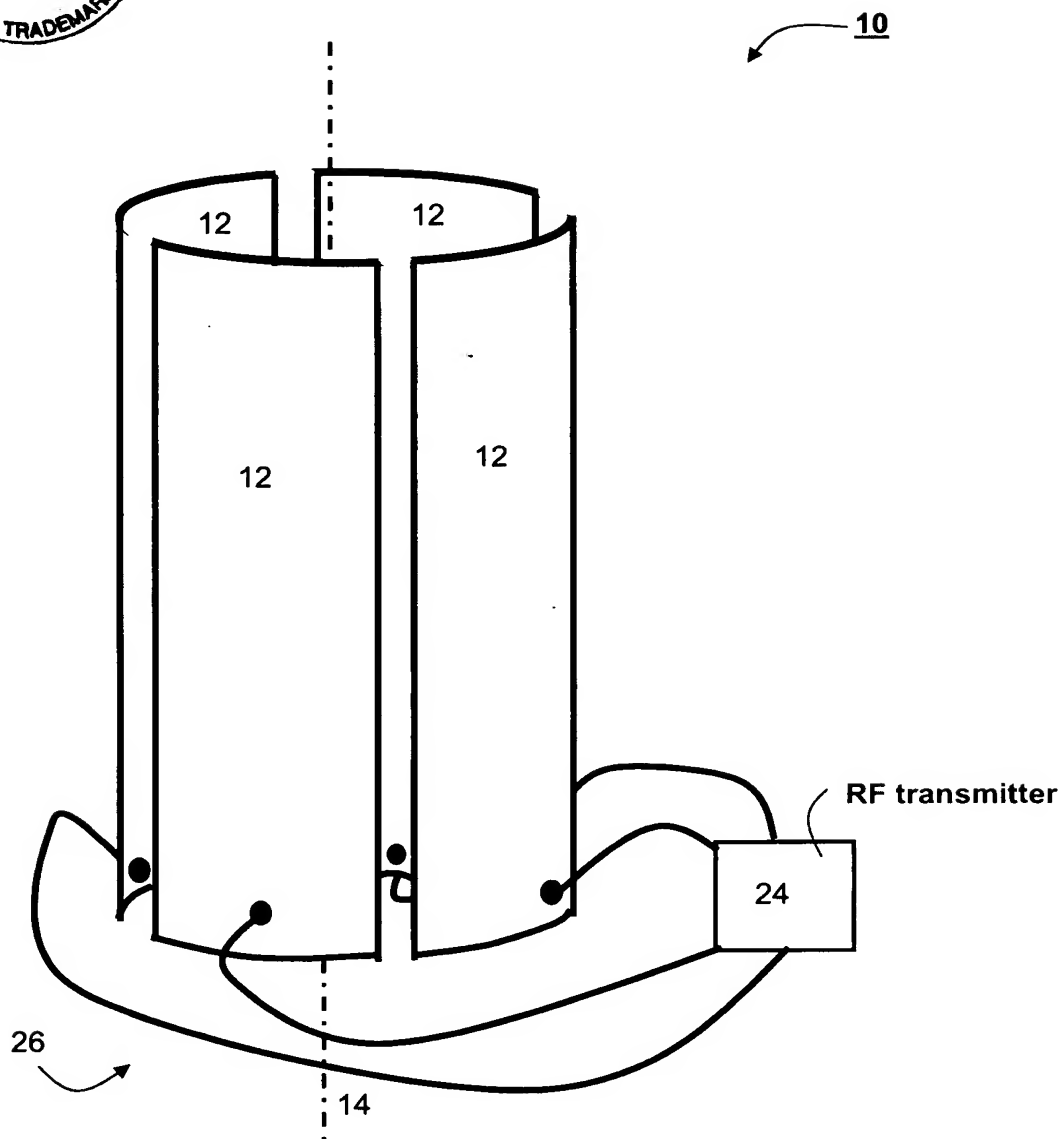


Fig. 8b